

REMARKS

Information Disclosure Statement

In the Office Action, the Examiner stated that he has considered the information disclosure statement submitted by the Applicant, however, "since it contains no references to prior art, it is not considered relevant to the prosecution of the application." Applicant's attorney does not understand the basis for the Examiner's statement that the information disclosure statement filed by the Applicant is not considered relevant to the prosecution of the application. Applicant's attorney respectfully directs the Examiner's attention to Section 3 of the information disclosure statement which describes the prior art known by Applicant. Applicant's attorney would respectfully appreciate the Examiner reviewing the statements found in Section 3 of the information disclosure statement when considering the patentability of the claims in the above referenced patent application.

Drawings

Figures 1, 2a, 2b, 3a, 3b, 4a, 4b, and 4c were objected to as not being designated by a legend such as "Prior Art". Applicant's attorney appreciates the Examiner noting that such Figures should be identified with a "Prior Art" legend. Attached hereto are red mark drawings having the proposed drawing correction, wherein the legend "--Prior Art--" has been added to Figures 1, 2a, 2b, 3a, 3b, 4a, 4b, and 4c. Reconsideration and withdrawal of the objection to the drawings is respectfully requested.

CLAIM REJECTIONS-35 U.S.C. § 103

Claims 1-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,165,183 to Hall et al. As will be discussed below, the basis for the rejection of claims 1-14 is unclear to Applicant's attorney.

The Examiner's attention is respectfully directed to MPEP § 2143 where the basic requirements of a *prima facie* case of obviousness are found. To establish a *prima facie* case of obviousness, three basic criterion must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all claim limitations. In this case, claim 1 recites a tilt compensator and delay element having at least three mirrors positioned to receive at least a portion of the light beam and to reflect at least a portion of the light beam out of the first plane and to reflect the light beam back into the first plane so as to provide tilt correction and to delay the light beam. A *prima facie* case of obviousness requires a prior art reference (or references when combined) teaching or suggesting all the claim limitations. Applicant cannot locate any teaching in the '183 patent which teaches at least three mirrors positioned to receive at least a portion of the light beam and to reflect at least a portion of the light beam out of the first plane and to reflect the light beam back into the first plane so as to provide tilt correction and to delay the light beam, as recited in Applicant's claim 1. Moreover, Applicant cannot locate any teaching in U.S. Patent No. 4,165,183 which would suggest or motivate one of ordinary skill in the

art to modify U.S. Patent No. 4,165,183 to include at least three mirrors positioned to receive at least a portion of the light beam and to reflect at least a portion of the light beam out of the first plane and to reflect the light beam back into the first plane so as to provide tilt correction and to delay the light beam as recited in claim 1.

In the Office Action, the Examiner states "both the plane of the beam and number of mirrors used to execute the beam are arbitrary, as they do not exhibit particular properties in any particular configuration." Applicant's attorney does not understand this statement. The Examiner has not directed Applicant's attention to any prior art reference providing support for this statement. Assuming that it was arbitrary to modify the number of mirrors to reflect the light beam in the Hall reference (for example in view of the other prior art configurations of interferometers), all of such mirrors would be positioned to reflect the light beam within the same plane, not out of the plane as recited in Applicant's claim 1. If the Examiner is relying on personal knowledge, rather than a prior art reference, then Applicant respectfully requests, pursuant to 37 CFR § 1.105(d)(2), an affidavit from the Examiner describing the Examiner's personal knowledge. The Applicant respectfully requests such affidavit so that such affidavit shall be subject to contradiction or explanation by the affidavits of the Applicant's and possibly other persons.

In light of the foregoing, it is Applicant's belief that claims 1 and 2 are patentable in view of U.S. Patent No. 4,615,183 to Hall. Reconsideration and withdrawal of the rejection of claims 1 and 2 is respectfully requested.

Regarding claim 3, it was stated, "while Hall does not teach a scanning mirror with opposing planar faces, he does teach a carriage with two corner cube reflectors (16, 18, 20). It would have been obvious to one of ordinary skill in the art at the time of invention

to substitute a planar scanning mirror for the carriage assembly of Hall, as they are functionally equivalent. Further it would be obvious to include such a delay element in the apparatus of Hall, for example in place of mirror 22 in Figure 6), for the reasons stated above." Applicant respectfully disagrees with the characterization that the planar scanning mirror and the two corner cube reflectors are "functionally equivalent." That is, the corner-cube reflectors are large, heavy, and slow moving. A scanning mirror having opposing planar reflecting sides, such as recited in claim 3, can be smaller, wider, and faster moving. Decreasing the size and weight of the scanning mirror improves the instrument by reducing its size and weight as well as increasing the speed, if desired, at which the carriage can be scanned over the interferometers operating range. Therefore, it is Applicant's belief that a planar scanning mirror and the carriage assembly of Hall are not functionally equivalent.

Moreover, it was stated in the Office Action that, "it would be obvious to include such a delay element in the apparatus of Hall, for example in place of mirror 220 in Figure 6), for the reasons stated above." It is Applicant's belief that it would not be obvious to include a tilt compensator and delay element as recited in claim 3 in view of the teachings of Hall. Applicant cannot locate any teaching in Hall which teaches or suggests a tilt compensator and delay element reflecting a light beam out of a first plane and then back into the first plane. Although it may be true that delay elements exist in the prior art, the Examiner has not directed Applicant's attention to any teaching which shows that the tilt compensator and delay element recited in claim 3 was known prior to Applicant's invention. Therefore, it is Applicant's belief that it would not be obvious to modify the teachings of Hall to include a tilt compensator and delay element as recited in Applicant's claim 3.

Regarding claim 4, 5, 7, 8, 10, 11, 13, and 14, it was stated in the Office Action that, "the placement of a tilt compensator and delay element is arbitrary and it would be obvious to one of ordinary skill in the art to place such a delay at any point within an interferometer configuration for the reasons as stated above" (emphasis added). Applicant respectfully disagrees with the Examiners statement, and requests either a prior art reference teaching that the placement of a tilt compensator and delay element is arbitrary, or an affidavit from the Examiner stating his personal knowledge to this effect.

Regarding claim 9, it is stated, "while Hall does not teach a Genzel Michelson interferometer arrangement specifically, such interferometric arrangements are notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time of invention to include such an arrangement in the apparatus of Hall." While Applicant admits that a Genzel Michelson arrangement is well known in the art, Applicant respectfully disagrees that a tilt compensator and tilt compensator and delay element "receiving one of the first light beam and the second light beam, ... reflecting the one of the first light beam and second light beam out of the first plane and reflecting the one of the first light beam and the second light beam back into the first plane so as to provide tilt correction and to delay the one of the first light beam and the second light beam," is known in the art.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-14 under 35 U.S.C. § 103(a).

Summary

The foregoing is intended to be a complete response to the Office Action dated March 13, 2003. Reconsideration and withdrawal of the objections and rejections is respectfully requested. Should the Examiner have any questions regarding the contents of this response or any other matter, Applicant's attorney would welcome a telephonic interview with the Examiner.

Respectfully submitted,

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